Distributed by:

JAMECO® ELECTRONICS

www.Jameco.com ✦ 1-800-831-4242

The content and copyrights of the attached material are the property of its owner.

Quality Engineering Test Report

SERIES: 65W TRIPLE OUTPUT OPEN FRAME SWITCHING POWER SUPPLY
SAMPLE:

A.PT-65A	**V1:+5V / 5.5A** **V2:+12V/ 2.5A** **V3:- 5V / 0.5A**	**C.PT-65C**	**V1:+5V / 5.5A** **V2:+15V / 2A** **V3:- 15V / 0.5A**
B.PT-65B	**V1:+5V / 5.5A** **V2:+12V / 2.5A** **V3:- 12V / 0.5A**	**D.PT-65D**	**V1:+5V / 4A** **V2:+12V / 2A** **V3:+24V / 1A**

NO	TEST ITEM	TEST CONDITION/SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:90~264VAC O/P:FULL LOAD	65VAC~267VAC	P
2	LINE REGULATION	I/P:90~264VAC SPEC: O/P:FULL LOAD A: V1:±1% V2:±2% V3:±1% B: V1:±1% V2:±2% V3:±1% C: V1:±1% V2:±2% V3:±1% D: V1:±1% V2:±2% V3:±3%	A: V1: -0.5 % ~ 0% V2: -0.05% ~ +1.4% V3: 0% ~ 0% B: V1: -0.24 % ~ +0.12% V2: -0.05% ~ +0.82% V3: -0.04% ~ 0% C: V1: -0.36% ~ 0% V2: -0.04% ~ +0.91% V3: 0% ~ 0% D: V1: 0% ~ 0% V2: -0.097% ~ +1.7% V3: +0.07% ~ +1.7%	P
3	LOAD REGULATION	I/P:230VAC SPEC: O/P: MIN. TO MAX.LOAD A: V1:±3% V2:±4% V3:±1% B: V1:±3% V2:±4% V3:±1% C: V1:±3% V2:±4% V3:±1% D: V1:±2% V2:±5% V3:±5%	A: V1: -0.5% ~ +0.5% V2: -0.98% ~ 1.09% V3: -0.12% ~ 0% B: V1: -0.74% ~ +0.62% V2: -0.78% ~ +0.72% V3: -0.05% ~ 0% C: V1: -0.62% ~ +0.74% V2: -1.2% ~ +0.96% V3: -0.04% ~ 0% D: V1: -1.6% ~ 1.1% V2: -0.2% ~ 0.6% V3: -1.3% ~ +1.4%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:90~264VAC SPEC: O/P:MIN.TO MAX A: V1:±4% V2:±7% V3:±5% B: V1:±4% V2:±7% V3:±5% C: V1:±4% V2:±7% V3:±5% D: V1:±4% V2:±6% V3:±6%	A: V1: -1.36% ~ +1.12% V2: -1.25% ~ +4.84% V3: 0% ~ +0.74% B: V1: -1.38% ~ +1.0% V2: -1.2% ~ +4.1% V3: 0% ~ +1.4% C: V1: -1% ~ +1.12% V2: -1.96% ~ +3.08% V3: -0.58% ~ 0% D: V1: -1.6% ~ +1.9% V2: 6.9% ~ -4.49% V3: -3.5% ~ +7%	P

NEXT

NO	TEST ITEM	TEST CONDITION/SPECIFICATION	RESULT	VERDICT
5	RIPPLE & NOISE	I/P:230VAC O/P: FULL LOAD SPEC: A: V1: 50mV V2:120mV V3: 50mV B: V1:50mV V2:120mV V3:100mV C: V1:50mV V2:120mV V3:100mV D: V1:50mV V2:100mV V3:200mV	A: V1: 12mV V2: 30mV V3: 11mV B: V1: 13mV V2: 90mV V3: 15mV C: V1: 10mV V2: 94mV V3: 12mV D: V1: 15mV V2: 61mV V3: 50mV	P
6	AC INPUT CURRENT	I/P:230VAC O/P:FULL LOAD SPEC:0.9A	A:0.71A	P
7	MAX. INRUSH CURREN	I/P:230VAC O/P: FULL LOAD COLD START SPEC:40A	A:27.05A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC O/P:MIN. LOAD SPEC: (-5%~+10%) A: 4.75V~5.5V B: 4.75V~5.5V C: 4.75V~5.5V D: 4.75V~5.5V	A:4.22V~6.14V B:4.26V~6.26V C:4.26V~6.16V D:4.45V~5.8V	P
9	SET UP TIME	I/P:230VAC\60Hz O/P:FULL LOAD SPEC:800mS	A:558mS	P
10	HOLD UP TIME	I/P:230VAC\60Hz O/P:FULL LOAD SPEC:20mS MIN.	A:92mS	P
11	EFFICIENCY	I/P:230VAC SPEC: A:76% B:77% C:77% D:79%	A: 76.68% B: 77.91% C: 78.21% D: 79.16%	P
12	OVER LOAD PROTECTION	I/P:230VAC O/P:TESTING SPEC:73W~95W	A:85W B:88W C:87W D:85W	P
13	OVER VOLTAGE PROTECTION	I/P:230VAC O/P:FULL LOAD SPEC:5.5V~6.5VDC ON V1	A:6.15V B:6.27V C:6.35V D:5.88V	P
14	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG----<0.5mA N-FG----<0.5mA	A: L-FG:0.41mA N-FG:0.4mA	P
15	INSULATION RESISTANCE	SPEC: O/P-FG :500VDC/100MΩ MIN. I/P-O/P :500VDC/100MΩ MIN. I/P-FG : 500VDC/100MΩ MIN.	A: O/P-FG: >100MΩ I /P-O/P: >100MΩ I /P-FG : >100MΩ	P
16	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3000VAC/ 1 MIN (10mA CUT-OFF) I/P - FG: 1500VAC/ 1 MIN (10mA CUT-OFF) O/P -FG : 500VAC/1MIN (10mA CUT-OFF)	A: NO BREAK I/P-O/P :5.14mA I/P-FG :4.73mA O/P-FG :2.16mA	P

PREVIOUS NEXT

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>TEST CONDITION / SPECIFICATION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>17</td><td>BURNIN TEST</td><td>I/P: 230VAC
O/P:FULL LOAD
TA:23.1℃
BURN-IN DURATION:2.5hrs</td><td>NO BREAK</td><td>P</td></tr>
<tr><td rowspan="3">18</td><td rowspan="3">ENVIRONMENT TEST</td><td>1.LOW TEMPERATURE TEST
I/P:82VAC O/P:80% LOAD
AMBIENT TEMPERATURE:-9.4℃</td><td>A:
AFTER 3 hrs
POWER ON OK</td><td rowspan="3">P</td></tr>
<tr><td>2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST
I/P:230 VAC O/P:FULL LOAD
AMBIENT TEMPERATURE:48.4℃</td><td>A:
AFTER 15 hrs
NON BREAK</td></tr>
<tr><td>3.ACCELERATED LIFE TEST
I/P:267 VAC O/P:FULL LOAD
POWER ON :3 min POWER OFF :5 sec
AMBIENT TEMPERATURE:85 ℃
AMBIENT HUMIDITY:95%</td><td>A:
AFTER 9 hrs
NON BREAK</td></tr>
<tr><td>19</td><td>TEMPERATURE RISE △T OF PARTS</td><td>A: I/P :230VAC AFTER 2.5hrs BURN-IN
O/P :FULL LOAD TA:23.1℃
<table>
<tr><th>POSITION</th><th>P/N</th><th>TEMP</th><th>△T</th></tr>
<tr><td>BD1</td><td>BRIDGE DIODE</td><td>54.9℃</td><td>31.8℃</td></tr>
<tr><td>Q1</td><td>MAIN TRANSISTER</td><td>68.9℃</td><td>45.8℃</td></tr>
<tr><td>T1</td><td>MAIN TRANSFORMER</td><td>77.5℃</td><td>54.4℃</td></tr>
<tr><td>D4</td><td>O/P DIODE</td><td>84.1℃</td><td>61℃</td></tr>
<tr><td>C22</td><td>O/P FILTER CAPACITOR</td><td>67.5℃</td><td>44.4℃</td></tr>
<tr><td>D5</td><td>O/P DIODE</td><td>82℃</td><td>58.9℃</td></tr>
<tr><td>RG1</td><td>7905</td><td>72.9℃</td><td>49.8℃</td></tr>
<tr><td>D1</td><td>CLAMPING DIODE</td><td>78.5℃</td><td>55.4℃</td></tr>
<tr><td>C5</td><td>I/P FILTER CAPACITOR</td><td>46.7℃</td><td>23.6℃</td></tr>
<tr><td>FL1</td><td>LINE FILTER</td><td>45.2℃</td><td>22.1℃</td></tr>
</table></td><td>P</td></tr>
<tr><td>20</td><td>LIFE CYCLE</td><td>SUPPOSE C22 IS THE MOST CRITICAL COMPONENT
I/P:230VAC O/P:FULLLOAD Ta:25℃ Tc22:69.4℃ Life time:61897hrs
I/P:230VAC O/P:FULLLOAD Ta:45℃ Tc22:84.1℃ Life time:22349hrs</td><td>P</td></tr>
<tr><td>21</td><td>CRITICAL COMPONENT RECORD
(FOR QC INSPECTION REFERENCE ONLY)</td><td colspan="3">FUSE :F4A/250VAC UL
BRIDGE DIODE :LT KB406G
LINE FILTER :LS TF-484-R1 ET-20V
TRANSFOMER :LS TF-443-R1 ETD-34
POWER SWITCHER :K2545 6A/600V TO-220F
OUTPUT DIODE :SF10SC4 10A/40V TO-220F
OUTPUT CAPACITOR :ELNA 3300uF/10V 105℃ RJH
INPUT CAPACITOR :HITACHI 150uF/400V,85℃
P.C.B :PT-65-R2,CEM-1 2 OZ SS</td></tr>
</table>

DATE	SAMPLE	TEST RESULT	TEST	APPROVL
980611	PT-65A	PASS	劉鴻慶	MAX LIN
20020910	PRODUCT SAMPLE 9912A20 PT-65D	PASS	VINCENT	MAX LIN

PREVIOUS